



21/1/97

*Transmittal Note*

**SUPPLEMENT TO**

**ANNEX 14 – AERODROMES**

**VOLUME II – HELIPORTS**

**(Second Edition)**

1. The attached Supplement supersedes all previous Supplements to Annex 14, Volume II, and includes differences notified by Contracting States up to 21 January 1997.
2. This Supplement should be inserted at the end of Annex 14, Volume II, Second Edition. Additional differences and revised comments received from Contracting States will be issued at intervals as amendments to this Supplement.

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**SUPPLEMENT TO**  
**ANNEX 14 — AERODROMES**  
**VOLUME II — HELIPORTS**  
**(Second Edition)**

Differences between the national regulations and practices of States and the corresponding International Standards contained in Annex 14, Volume II, as notified to ICAO in accordance with Article 38 of the *Convention on International Civil Aviation* and the Council's resolution of 21 November 1950.

JANUARY 1997

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INTERNATIONAL CIVIL AVIATION ORGANIZATION

**RECORD OF AMENDMENTS TO SUPPLEMENT**

<i>No.</i>	<i>Date</i>	<i>Entered by</i>	<i>No.</i>	<i>Date</i>	<i>Entered by</i>
1	18/2/99				

**RECORD OF AMENDMENTS TO ANNEX 14, VOLUME II SUBSEQUENT TO  
SECOND EDITION ISSUED JULY 1995**

<i>No.</i>	<i>Date of adoption or approval</i>	<i>Date applicable</i>	<i>No.</i>	<i>Date of adoption or approval</i>	<i>Date applicable</i>

### 1. Contracting States which have notified ICAO of differences

The Contracting States listed below have notified ICAO of differences which exist between their national regulations and practices and the International Standards and Recommended Practices of Annex 14, Volume II, Second Edition, or have commented on implementation.

The page numbers shown for each State and the dates of publication of those pages correspond to the actual pages in this Supplement.

State	Pages in Supplement	Date of publication
Argentina	1	18/2/99
Australia	1	18/2/99
Austria	1	21/1/97
Canada	1	21/1/97
Chile	1	18/2/99
France	1	18/2/99
Germany	1	18/2/99
Greece	1	21/1/97
Netherlands	1	18/2/99
New Zealand	1	18/2/99
Norway	1	18/2/99
Spain	1	21/1/97
Sweden	1	18/2/99
United Arab Emirates	1	18/2/99

### 2. Contracting States which have notified ICAO that no differences exist

Bahrain	Kyrgyzstan	Portugal
Barbados	Namibia	Switzerland
China (Hong Kong SAR)	Niger	Tunisia
Finland	Oman	United Kingdom
Ireland	Pakistan	United Republic of Tanzania
Jordan	Peru	Uruguay

### 3. Contracting States from which no information has been received

Afghanistan	Bhutan	Chad
Albania	Bolivia	Colombia
Algeria	Bosnia and Herzegovina	Comoros
Angola	Botswana	Congo
Antigua and Barbuda	Brazil	Cook Islands
Armenia	Brunei Darussalam	Costa Rica
Azerbaijan	Bulgaria	Côte d'Ivoire
Bahamas	Burkina Faso	Croatia
Bangladesh	Burundi	Cuba
Belarus	Cambodia	Cyprus
Belgium	Cameroon	Czech Republic
Belize	Cape Verde	Democratic People's Republic of Korea
Benin	Central African Republic	

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Democratic Republic of the Congo	Latvia	Saint Lucia
Denmark	Lebanon	Saint Vincent and the Grenadines
Djibouti	Lesotho	Samoa
Dominican Republic	Liberia	San Marino
Ecuador	Libyan Arab Jamahiriya	Sao Tome and Principe
Egypt	Lithuania	Saudi Arabia
El Salvador	Luxembourg	Senegal
Equatorial Guinea	Madagascar	Seychelles
Eritrea	Malawi	Sierra Leone
Estonia	Malaysia	Singapore
Ethiopia	Maldives	Slovakia
Fiji	Mali	Slovenia
Gabon	Malta	Solomon Islands
Gambia	Marshall Islands	Somalia
Georgia	Mauritania	South Africa
Ghana	Mauritius	Sri Lanka
Grenada	Mexico	Sudan
Guatemala	Micronesia (Federated States of)	Suriname
Guinea	Monaco	Swaziland
Guinea-Bissau	Mongolia	Syrian Arab Republic
Guyana	Morocco	Tajikistan
Haiti	Mozambique	Thailand
Honduras	Myanmar	The former Yugoslav Republic of Macedonia
Hungary	Nauru	Togo
Iceland	Nepal	Tonga
India	Nicaragua	Trinidad and Tobago
Indonesia	Nigeria	Turkey
Iran (Islamic Republic of)	Palau	Turkmenistan
Iraq	Panama	Uganda
Israel	Papua New Guinea	Ukraine
Italy	Paraguay	United States
Jamaica	Philippines	Uzbekistan
Japan	Poland	Vanuatu
Kazakhstan	Qatar	Venezuela
Kenya	Republic of Korea	Viet Nam
Kiribati	Republic of Moldova	Yemen
Kuwait	Romania	Zambia
Lao People's Democratic Republic	Russian Federation	Zimbabwe
	Rwanda	

**4. Paragraphs with respect to which differences have been notified**

<i>Paragraph</i>	<i>Differences notified by</i>	<i>Paragraph</i>	<i>Differences notified by</i>
1.2	New Zealand	3.2.2	Austria Canada
2.1	Spain United Arab Emirates	3.2.5	Canada
2.1.1	Austria	3.2.7	United Arab Emirates
2.1.2	Germany Netherlands	3.3.2	Canada United Arab Emirates
2.1.3	Germany	3.4.1	Canada
2.1.4	Germany	4.2.5	Netherlands
2.1.5	Germany	4.2.8	Sweden
2.1.6	Germany	4.2.15	United Arab Emirates
2.1.7	Argentina United Arab Emirates	5.1.1.2	United Arab Emirates
2.3	United Arab Emirates	5.2.2.3	Norway
2.3.1	Argentina Chile	5.2.2.4	Norway
2.3.2	Argentina	5.2.3.3	Canada
2.4.1	Argentina	5.2.4.4	Netherlands Norway
2.4.2	Netherlands	5.2.7.4	Norway
2.4.3	Netherlands	5.2.12.2	Norway
		5.2.13.2	Norway
3.1.2	Austria	5.3	United Arab Emirates
3.1.3	Australia Austria	5.3.3.2	Australia
3.1.11	Australia	5.3.3.3	Australia
3.1.12	Australia	5.3.3.4	Greece
3.1.14	Australia	5.3.3.6	Greece
3.1.18	Netherlands	5.3.6.2	Australia Canada
3.1.23	Netherlands	5.3.8.13	Canada
3.1.33	Netherlands		
3.1.34	Australia	6.1	France
3.1.37	Canada	Appendix 1	Argentina Germany Sweden
3.1.39	Netherlands		
3.2.1	Canada		

**CHAPTER 2**

2.1.7 The geoid undulation is not provided.

2.3.1

2.3.2 *Remark:* It is not possible to provide it with the required precision.

2.4.1 g) The ground profile in clearways is not always provided.

*Remark:* It is not possible to provide such information until topographic measurements are made.

**APPENDIX 1**

Table 1 The geographical coordinates of the obstacles in the circling area and at the heliport are not provided, nor are those of the significant obstacles in the approach and take-off area.

*Remark:* It is not possible at present to provide such information.

Table 2 The geoid undulation is not provided at the heliport elevation position, at the FATO threshold and at the geometric centre of the TLOF for non-precision approaches; at the FATO threshold and at the geometric centre of the TLOF for precision approaches.

*Remark:* It is not possible to provide it with the required precision.

The elevation/altitude/height of the distance measuring equipment/precision (DME/P) is not provided.

*Remark:* It is not possible to provide such information until topographic measurements are made.

The integrity and classification of the aeronautical data are not provided.

*Remark:* There is no electronic database available.

*Comment on implementation:*

<i>Annex provision</i>	<i>Proposed date of implementation</i>
Chapter 2	To be confirmed in the second half of 1998.
2.1.7	
2.3.1	
2.3.2	
2.4.1 g)	
Appendix 1	To be confirmed in the second half of 1998.
Table 1	
Table 2	

**CHAPTER 3**

- 3.1.3 The overall slope is not to exceed 7.5 degrees.
- 3.1.11 The landing and lift-off area (LLA equivalent to TLOF) should have an area equal in size to the undercarriage contact points plus one metre on all sides.
- 3.1.12 The overall slope of the LLA, in any direction, should not exceed the slope landing capability of the helicopter.
- 3.1.14 Australian guidelines do not require a safety area.
- Remark:* Australian FATO is 2 times the overall length/width in lieu of 1.5 times the overall length/width as required by Annex 14, Volume II.
- 3.1.34 Australian guidelines do not specify the dimensions of an air transit route.

**CHAPTER 5**

- 5.3.3.2 The direction of approach should be indicated by at least two omnidirectional green lights or by one white lead-in light.
- 5.3.3.3\*
- 5.3.6.2 The edge of the FATO should be defined by omnidirectional white lights spaced not more than eight metres apart or by a combination of markings and floodlighting. Where this is not practicable, the GEA should be so defined.
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\*Recommended Practice



**CHAPTER 2**

- 2.1.1 The geographical coordinates are reported in Austria in degrees, minutes, seconds. Geographical coordinates with accuracy as defined in Annex 14 will be reported with application of the WGS-84 latest at 1 January 1998.

**CHAPTER 3**

- 3.1.2 For designing and classifying heliports no distinction is made between performance classes of helicopters.  
FATOs are divided into three classes by minimum length (diameter) requirement.
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FATOs are divided into three classes by minimum length (diameter) requirement.
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**CHAPTER 3**

- 3.1.37 The minimum clearance between a helicopter stand and an object or other aircraft stand may be reduced to 3 metres in Canada.
- 3.2.1 Canada makes provision for performance class 3 helicopter operations at elevated heliports. The dimensions of the FATO at elevated heliports for performance class 3 helicopters is the same as that used for performance class 2 helicopters.
- 3.2.2 b) Canada makes provision for performance class 3 helicopter operations at elevated heliports. The dimensions of the FATO at elevated heliports for performance class 3 helicopters is the same as that used for performance class 2 helicopters.
- 3.2.5 Canada does not require a safety area around the FATO of elevated heliports.
- 3.3.2 The FATO for single main rotor helicopters operating on helidecks within the inland waters of Canada shall be of sufficient size to contain a circle of a diameter not less than the main rotor diameter of the design helicopter.
- 3.4.1 The Canadian standards for the size of a FATO located at the bow or stern of a vessel for a single main rotor helicopter requires the FATO to be of sufficient size to contain a circle with a diameter not less than the main rotor diameter of the design helicopter.

**CHAPTER 5**

- 5.2.3.3 Canada indicates the maximum allowable mass markings in thousands of pounds on the touchdown and lift-off area of elevated heliports and helidecks.
- 5.3.6.2 b) Canada requires a minimum of five lights to mark a circular FATO.
- 5.3.8.13 Canada permits the use of retro-reflective markers as the minimum lighting requirements at remote heliports where it is impractical to provide lighting.
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**CHAPTER 2**

- 2.3.1 The heliport elevation shall be measured and reported to the aeronautical information services authority to the accuracy of one-half metre or foot.

*Remark:* Chilean authorities responsible for providing geodetic data have not yet determined WGS-84 vertical reference data sufficient to obtain the geoid undulation. Therefore, once these authorities have provided that information, we shall be in a position to make the corresponding publications.

*Note.— In view of the above, we are still waiting to adopt the Standards in which subjects are mentioned relating to geoid elevation data, for example, paragraphs 2.1.7, 2.3.2, etc.*

## **CHAPTER 6**

- 6.1 In France the minimum level of protection is assured at surface level heliports by a quantity of 50 kg of powder or equivalent and at elevated heliports by a quantity of 250 kg of powder or equivalent.

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**CHAPTER 2**

- 2.1.2 Full implementation of the quality system can only be achieved by the date indicated.  
 2.1.3  
 2.1.4\*
- 2.1.5 Publishing of the heliport reference points in WGS-84 will be an ongoing task for some time after the date  
 2.1.6 of applicability of Amendment 2.

**APPENDIX 1**

- Table 1 In Germany the description of obstacles differs as follows from what is given in these tables.  
 Table 2
- a) Obstacles in the circling area for non-precision and turning departures and at the heliport.
  - b) Significant obstacles in the precision approach and straight departure area.
- Table 2 The WGS-84 geoid undulation at heliport elevation position will not be published in Germany.
- Remark:* This item is not considered to be required for VFR heliports. As concerns potential German IFR heliports, the WGS-84 geoid undulation would always be published for the FATO threshold, TLOF geometric centre. This would even apply for non-precision approaches because the MDH is also referred to this position.

*Comment on implementation:*

<i>Annex provision</i>	<i>Proposed date of implementation</i>
Chapter 2	31 December 1998
2.1.2	
2.1.3	
2.1.4*	
Appendix 5	It is not intended to comply with this provision.
Table 1 and Table 2	

\*Recommended Practice

**CHAPTER 5**

- 5.3.3.4\*      The approach lighting system provided for a non-precision final approach and take-off area is 90 metres in length.
- 5.3.3.6\*      The installation of steady lights of the heliports regarding their light distribution and intensity has been realized in compliance with the previous editions of Annex 14, Volume II.

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\* Recommended Practice

**CHAPTER 2**

- 2.1.2 b) and c) In the Netherlands it is not yet considered necessary to determine the geographical coordinates of the  
2.4.2 geometric centre of the touchdown and lift-off area, thresholds of the final approach and take-off area,  
2.4.3 centre line points of the helicopter ground taxiways, air taxiways and air transit routes and helicopter stands  
in terms of the World Geodetic System — 1984 (WGS-84) geodetic reference datum.

**CHAPTER 3**

- 3.1.18 The height limitation of 25 cm applies for helidecks and elevated heliports only. For ground level heliports  
the maximum height of objects permitted in the safety area shall not exceed 35 cm.
- 3.1.23 The separation distances between:  
— a helicopter-ground-taxiway and object shall not be less than 1x the greatest overall width of a  
helicopter with rotor turning (centre line to object);  
— a helicopter-ground-taxiway and a helicopter stand shall not be less than 1x the greatest overall width  
of a helicopter with rotor turning (centre line to edge).
- 3.1.33 The separation distance between:  
— an air-taxiway and another air-taxiway shall not be less than 3x the greatest width of a helicopter with  
rotor turning (between centre lines);  
— an air-taxiway and a helicopter-ground-taxiway shall not be less than 3x the greatest width of a  
helicopter with rotor turning (between centre lines);  
— an air-taxiway and a helicopter stand shall not be less than 1.5x the greatest width of a helicopter with  
rotor turning (centre line to edge).
- 3.1.39 The separation distance between the edge of a runway strip and the edge of a FATO shall not be less than  
2x the overall length of the largest helicopter the FATO is intended to serve.

**CHAPTER 4**

- 4.2.5 The slopes for visual approach and visual take-off for Class 2 and Class 3 helicopters for the first section  
shall be 12.5 per cent.

**CHAPTER 5**

- 5.2.4.4 The height of the marker shall not exceed 35 cm above ground or snow level.

**CHAPTER 1**

1.2 New Zealand has no heliports intended to be used by helicopters in international civil aviation.

New Zealand Civil Aviation Rules Part 139 prescribe rules governing the certification and operation of aerodromes and rules for operators of aircraft using aerodromes.

No person shall operate an aerodrome serving any aeroplane having a certified seating capacity of more than 30 passengers that is engaged in regular air transport operations except under the authority of, and in accordance with the provisions of, an aerodrome operating certificate issued for that aerodrome under New Zealand Civil Aviation Rules Part 139.

*Remark:* An aerodrome operator who is not required to hold an aerodrome operating certificate may apply for an aerodrome operating certificate.

New Zealand heliports are not required to be certificated.

Except for a person operating a helicopter on an external load operation, no person operating a helicopter shall use any place within a populous area as a heliport unless the heliport has physical characteristics, obstacle limitation surfaces and visual aids commensurate with the characteristics of the helicopter being operated and the ambient light conditions during operations, and the heliport is clear of all persons, animals, vehicles or other obstructions during the hover, touchdown or lift-off other than persons and vehicles essential to the operation, and the selected approach and take-off paths are such that, if the helicopter is not a performance Class 1 helicopter, an autorotative landing can be conducted without any undue risk to any person on the ground, and the helicopter can be manoeuvred in the aerodrome traffic circuit clear of any obstructions, and not in conflict with the aerodrome traffic circuit or instrument approach of any other aerodrome.

*Remark:* New Zealand CAA Advisory Circular AC139-08 contains heliport design standards for heliports in populous areas that are acceptable to the Director.



**CHAPTER 5**

5.2.2.3 Markings shall be yellow in colour instead of white in colour.

5.2.2.4

5.2.4.4

5.2.7.4

*Remark:* Yellow markings are used due to the need for improved visual references during the winter season when the heliport identifications are covered with ice and snow.

5.2.12.2 Air transit route markings are located along the edge of the air transit route only.

5.2.13.2

*Remark:* The reason for this is due to the possible damage which markers along the centre line may cause if the helicopter is forced to a sudden touchdown.

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## CHAPTER 2

- 2.1 At the present time, geographical coordinates indicating latitude and longitude are not expressed in terms of the WGS-84 system.

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**CHAPTER 4**

- 4.2.8 The separation between the take-off climb surface and the approach surface is required to be 90 degrees or more, instead of 150 degrees.

**APPENDIX 1**

Table 1 to  
Table 5 *Comment on implementation:*

For heliports with instrument approach procedures, Appendix 1, Tables 1-5 will be implemented on 23 April 1997, except that obstacles in the circling area and in the outer parts (>3 km) of the approach and take-off areas will have an accuracy of 30 m in latitude/longitude (Table 1) and 5 m in elevation (Table 2). Obstacle data not meeting the requirements of Appendix 1 will be identified with effect from 23 April 1998. For other heliports, the implementation of Appendix 1 is yet to be determined.

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**CHAPTER 2**

- 2.1 CRC not yet implemented.
- 2.1.7 Geoid undulation information not available.
- 2.3

*Comment on implementation:*

- 2.1 November 2000.
- 2.1.7
- 2.3

**CHAPTER 3**

- 3.2.7 Frangible objects on some older structures do not meet new standards.
- 3.3.2 Some helidecks on older structures are of non-standard size.

**CHAPTER 4**

- 4.2.15 Some helidecks on older structures do not meet requirements for mobile obstacles.

**CHAPTER 5**

- 5.1.1.2 Some helidecks are not equipped with standard wind direction indicators.
- 5.3 Non-standard lighting systems are installed on some older helidecks.

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